

REMARKS

Claims 1-45 were pending in the application. Claims 15, 16, and 37 have been cancelled. Claims 2, 20, and 38-43 have been amended. Claims 2 and 20 have been amended to correct an antecedent basis problem. Claims 38-43 have been amended to depend on claim 17 instead of cancelled claim 37, and to be consistent with the preamble of claim 17. Accordingly, claims 1-14, 17-36, and 38-45 will be pending after entry of the present amendment.

U.S.C. § 101 Rejections

In the present Office Action, claims 15, 16, and 37-43 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Applicant submits that these rejections are moot because claims 15, 16, and 37 have been cancelled and claims 38-43 have been amended to depend on pending independent claim 17.

U.S.C. § 112 Rejections

In the present Office Action, claim 2 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant requests withdrawal of this rejection in view of the amendment to claim 2.

U.S.C. § 102 Rejections

In the present Office Action, claims 1-6, 11, 15-20, 26-29, 33-42, 44, and 45 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Fischer (U.S. Patent No. 5,005,200 hereinafter "Fischer"). Applicant has reviewed the reference and believes the pending claims recite a combination of features neither disclosed nor suggested by the

cited art. Accordingly, Applicant respectfully traverses the above rejections and requests reconsideration.

Generally speaking, the claimed invention is directed to a system and method that a recipient may use to certify a message received from a sender whose identity may be unknown to some degree. While the sender may include a digital signature in the message, the recipient may need to follow a process for certifying the message including verifying the signature before processing the message. Certification may also include routing the message to one or more external services that assist in the certification process. The recipient performs signature verification after the message is received, i.e., at a time when the message is no longer under the control or possession of the sender. More specific aspects of message routing are recited in the claims. For example, claim 1 recites

“A method for routing messages comprising:
receiving a message from a sender;
converting the message into an internal format, wherein said converting
comprises adding at least an attribute part to a data part of the
message;
writing into said attribute part data extracted from said received message
and data indicative of a protocol by which the message was
received; and
routing said converted message in dependence on the data in said attribute
part.”

Applicant submits claim 1 recites features that are neither disclosed nor suggested by the cited art. For example, in paragraph 7 of the present Office Action, it is stated:

“Fischer teaches a method for routing messages comprising:

- receiving a message from a sender (column 17, lines 18-33)
- a parser for converting the message into an internal format by adding at least an attribute part to a data part of the received message (column 17, lines 30-41 and 60-66)
- a protocol handler for writing into said attribute part data extracted from said received message and data indicative of a protocol (column 17, lines 36-38 and 45-46)

- routing said converted message in dependence on the data in said attribute part (figure 5; column 11, lines 25-52; column 12, lines 55-62; column 17, lines 26-30; column/line 17/60-18/2; column 19, lines 1-6)
...

However, Applicant respectfully submits that Fischer does not teach all of the above features. In contrast to the presently claimed invention, Fischer merely discloses a method of validating a received message that includes examining each of a set of included signatures to validate that they are certified. For example, Fischer discloses:

"In validating the object and its signatures, the recipient may, for example proceed as follows.

...

In this example, the owner of 154 has obtained the necessary counter signatures 160 and 164 by the holders of certificates 162 and 166, as well as the necessary joint-signatures 168, 180 and 200.

...

All certificates must be accompanied by signatures which are themselves authorized by antecedent certificates. Ultimately all the authority can be traced to a set of certificates which have been signed by the holder of the meta-certificate (or possibly a small set of meta-certificates). Each meta-certificate is well known and distributed to all parties "throughout the world".

The recipient examines every signature supplied and verifies that each accurately signs its purported object (whether the object is a primary object, a certificate, or another signature) using the procedure detailed in FIG. 3. The recipient insures that each signature includes a corresponding validated certificate.

If a certificate requires joint signatures, then the recipient insures that the required number of these necessary signatures (to the same object) are present. If the certificate requires counter signatures, then the recipient insures that the required number from the designated subset are present (the counter signatures have signatures as their object).

All certificates are then examined. A check is made for the special meta-certificate which has no signature but which is universally known and trusted and a copy of which is already stored in the recipient's computer. If a certificate is received which claims to be the meta-certificate but which is not equal to that already known to and accepted by the recipient, then a rejection is issued. If the meta-certificate is properly recognized, then the validation process continues." (Fischer, col. 21, line 45 to col. 22, line 46).

As may be seen from the above, the recipient examines every signature supplied and verifies that validating certificates accompany each one. All required signatures and corresponding certificates must be present in the message for it to be validated. It is up to the owner (sender) to obtain the necessary counter signatures and joint-signatures. While, Fischer may therefore disclose receiving a message from a sender, Fischer does not disclose adding at least an attribute part to a data part of the message, or writing data extracted from said received message and data indicative of a protocol by which the message was received into said attribute part, or routing said converted message in dependence on the data in said attribute part, as recited. Rather, Fischer's validation method merely includes an examination of the signatures and certificates included in the message.

Further, Applicant notes that the portions of Fischer cited by the Examiner describe procedures for a message owner to obtain necessary counter signatures and joint-signatures before sending the message, rather than a method for routing a message received from a sender. For example, Fischer discloses:

"Turning next to the creation of a counter signature which is shown in FIG. 4, initially A signs at 63 a primary object 60 in accordance with the procedure outlined in detail in conjunction with FIG. 2. The primary object 60 may be a purchase order or some other commitment or it may be a counter signature of some other signature of a primary object.

As explained above in regard to FIG. 2, the process of A signing an object may also involve some other party signing A's signature. Thus, A's certificate 62 specifically defines at 65 that, in order for A's signature to be valid (i.e., ratified), a counter signature by C is required, for example, using C's specific certificate Y.

After A signs the object, A's signature packet 66 is then forwarded along with the primary object and all associated signatures and certificates to C and A requests that C add his counter signature 64. Upon receiving the material, C reviews all existing signature certificates and the primary object and if everything meets with his approval he would decide to sign A's signature 68. A's signature inherently reflects the primary object and C's signature inherently reflects A's signature so C will essentially have "signed on the line below A's signature".

Once C decides to approve A's signature at 68, the process of creating a signature as shown in detail in FIG. 2, is duplicated except that the object is A's signature. Thus, with A's signature as the object (and the type of object being designated as a signature at 72), the counter signature date 74, C's counter signature comment 76, and C's certificate 70 are applied to a hashing algorithm 80 to thereby result in a presignature hash 82. At the same time, these fields are also inserted into the counter signature packet 88 as discussed above with respect to the signature packet 42 (with a hashing algorithm 69 being applied to the signature object).

Presignature hash 82 and C's secret key 92 are applied in a signature operation 84 to generate a counter signature seal 86. This counter signature seal becomes part of the counter signature packet 88 in precisely the same fashion as described previously in regard to the creation of signature packet 42 in FIG. 2.

Because the certificate "Y" which C must use to perform the signature has been explicitly stated (in the certificate which A used to sign), C may also be required to meet his own cosignature obligations so specified by "Y" and forward this entire package including his own newly added signature on to other parties for further cosignatures (either joint or counter signatures). This recursive signature gathering process continues until sufficient signatures are added to fully satisfy all cosignature requirements of at least one party who initially signed the primary object." (Fischer, col. 17, line 18 to Col. 18, line 2).

As may be seen from the above Fischer discloses that A forwards a signature packet along with the primary object and all associated signatures and certificates to C. Upon receiving the material, C reviews all existing signature certificates and the primary object and if everything meets with his approval he would decide to sign A's signature. Using a broad interpretation of claim 1, one might equate A's forwarding a primary object with signatures to C with C receiving a message from a sender. However, Fischer does not disclose that C converts a message into an internal format, as recited. Rather, C merely reviews all existing signature certificates and the primary object and if everything meets with his approval, signs A's signature. Signing A's signature is not equivalent to adding an attribute part to a data part and "writing into said attribute part data extracted from said received message and data indicative of a protocol," as is recited in claim 1. Furthermore, Fischer does not disclose routing said converted message in dependence on the data in said attribute part, as recited. C merely forwards the entire package to other

parties for further cosignatures. However, since C's forwarding is based on data that existed in the primary object and was not added to an attribute part, C's forwarding is not dependent on data in the attribute part.

For at least the above reasons, Applicant submits that claim 1 is patentably distinguishable over the cited art. Further, because claims 17, 18, 19, 44, and 45 include similar features to that of claim 1, claims 17, 18, 19, 44, and 45 are patentable over the cited art for similar reasons. Likewise, as each of dependent claims 2-14, 20-36, and 38-43 includes at least the features of the above independent claims upon which it depends, each of dependent claims 2-14, 20-36, and 38-43 is believed patentable as well.

U.S.C. § 103 Rejections

In addition to the above, claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Fischer by U.S. Patent No. 5,005,200 in view of Maytas, U.S. Patent No. 6,102, 287.). In view of the above remarks, Applicant submits that further traversal of these rejections is unnecessary at this time.

In the present Office Action, claims 12-14, 30-32, and 43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fischer (U.S. Patent No. 5,005,200 hereinafter "Fischer"). Applicant has reviewed the reference and believes the pending claims recite a combination of features neither disclosed nor suggested by the cited art. Accordingly, Applicant respectfully traverses the above rejections and requests reconsideration.

On page 7, paragraph 10 of the present Office Action, it is suggested,

"Fischer teaches a manager, for example, reviewing a purchase order (column 17, lines 25-53). It is well known that a manager supervises a plurality of employees and that multiple purchase requests are submitted to the manager for authorization, thus forming a 'queue'. Therefore, it would have been obvious for the manager to review a particular purchase order to see if the manager has already applied the signature (i.e., transaction identifier) before the order is sent to a merchant and if not

apply the signature (see USPTO, SPE, junior examiners). Fischer also teaches a manager using a digital signature (i.e., transaction identifier) to determine whether there exists previously stored context indicating a state of the transaction (column 15, line 42-59; column 17, lines 33-36). Fischer also teaches the manager adding (or updating) context (column 15, lines 42-59; column 17, lines 41-47) to the message if the manager desires (column 15, lines 56-59)."

However, Applicant respectfully submits that claims 12-14 recite features that are not obvious in view of the disclosure of Fischer. For example, claim 12 recites:

"The method of claim 1, further comprising:
determining whether there exists a transaction identifier associated with
the received message, the message corresponding to a transaction;
and
generating a transaction identifier for the message in response to
determining no transaction identifier associated with the message
exists."

In contrast to the presently claimed invention, Fischer generally discloses a signer "C" applying a signature to an object received from the object's owner "A". The Examiner appears to suggest that C's signature is equivalent to a transaction identifier, as recited. However, Applicant submits that C's signature identifies C irrespective of which object it is applied to, and hence is unsuitable for use as a transaction identifier. Assuming that C's signature is applied to two or more objects associated with unrelated transactions, Applicant finds no teaching or suggestion in Fischer of a method of identifying the transactions using C's signature. Accordingly, Applicant submits that Fischer also does not disclose "generating a transaction identifier for the message in response to determining no transaction identifier associated with the message exists" as is recited in claim 12.

In addition, claims 13 and 14 recite

"The method of claim 12, further comprising:
utilizing a transaction identifier associated with the message to determine
whether there exists a previously stored context which indicates a
state of the transaction; and

creating a context associated with the message in response to determining no context exists for the message.”
and

“The method of claim 13, wherein the transaction comprises a series of messages, and wherein the method further comprises updating a context associated with the transaction as the series of messages are processed.”

Applicant submits the cited art neither teaches nor suggests all of the features of claim 14. The claimed transaction comprises a series of messages and a context is associated with the transaction. It is clear from the above that the context, as recited, is stored separately from the messages. Applicant finds no corresponding disclosure in Fischer of contexts stored separate from messages or associated with a transaction comprising a series of messages. Accordingly, Applicant submits that Fischer also does not disclose “the transaction comprises a series of messages, and wherein the method further comprises updating a context associated with the transaction as the series of messages are processed” as is recited in claim 14.

For at least the above reasons, Applicant submits that claims 12-14 are patentably distinguished from the cited art, taken either singly or in combination. Further, because claims 30-32 and 43 include similar features to that of claims 12-14, claims 30-32 and 43 are patentable over the cited art for similar reasons.

In the present Office Action, claims 21-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fischer (U.S. Patent No. 5,005,200) in view of Barnes et al., U.S. Patent No. 5,970,475). In view of the above remarks, Applicant submits that further traversal of these rejections is unnecessary at this time.

In view of the above comments, Applicant requests withdrawal of the rejections. Should the examiner believe there remain issues which would prevent the present application from proceeding to allowance, a telephone interview is requested by the below signed representative, at (512) 853-8866, in order to facilitate a resolution.

CONCLUSION

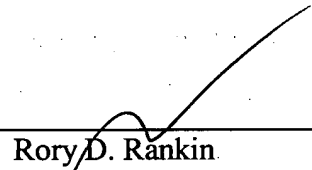
Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-77301/RDR.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,



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